

03 Dec 20

## MAA/RN/2020/17 – Function of the Compliance Verification Engineer Explained

### Issue

1. The concept of the Compliance Verification Engineer (CVE) was introduced into the Defence Air Environment (DAE) through the publication of RA 5850<sup>1</sup>. Hitherto the independent Airworthiness scrutiny of the design was not directly linked to showing compliance with the Certification Programme.

### Aim

2. To provide Design Organizations (DO), Type Airworthiness Authorities and Commodity Delivery Team Leaders with guidance on the role of the CVE.

### Implementation

3. This guidance is effective immediately.

### Background

4. With the implementation of European Military Airworthiness Requirements (EMAR) 21 into the MAA Regulatory Publications (MRP) through the Type Airworthiness Engineering (TAE) Regulatory Articles (RA) 5000 Series, the MAA have introduced the requirement for an independent checking function of 'showing compliance' with design requirements which is to be undertaken by the CVE within the DO. This is not to be confused with the role of the Independent Technical Evaluator (ITE), who is appointed by the Delivery Team, independent of the DO and is to provide independent analysis of the DO evidence.

5. The principle of the CVE function within RA 5850(3)<sup>2</sup> is similar to that used by civil aviation but with some differences. In civil aviation the CVE function was introduced to support the concept of Privilege whereby the DO could approve, for example, Minor modifications against the Airworthiness Code without recourse to the authority. In the DAE the CVE function is also applicable to Products, Parts and Appliances that have a contracted specification in addition to, or instead of, an Airworthiness Code such as Def Stan 00-970<sup>3</sup>.

### Guidance

6. The DO is to identify in its Design Organization Exposition (DOE) how it has implemented the independent checking of the 'showing compliance' function through the appointment of CVEs by a competent individual. Where the DO uses alternative terminology to that of CVE this is to be clearly stated.

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<sup>1</sup> Refer to RA 5850 - Military Design Approved Organization (MRP Part 21 Subpart J).

<sup>2</sup> Refer to RA 5850(3): Design Management System (MRP Part 21.A.239).

<sup>3</sup> Refer to Design and Airworthiness Requirements for Service Aircraft.

7. The DO should identify in its DOE those disciplines it requires the CVE function to cover in the scope of its Design Approved Organization Scheme (DAOS) approval. It should also make clear whether the CVE function is applied to all of its MOD contracts, and if not, which contracts it is applied to. This is to include the qualifications and experience required of the CVE, selection process, appointment and continued development to show they are, and continue to be, technically competent in the discipline they are verifying. The DO is to retain written records of the assessment and authorization of the CVE for at least 2 years after either: a person has ceased employment within the organization or revocation of the authorization, whichever is the sooner. An individual can be a CVE for more than one discipline where they can demonstrate appropriate competence.
8. The CVE performing the independent checking of the 'showing compliance' function cannot be the person creating the compliance data. However, the CVE may work in conjunction with the individual who prepares the compliance data.
9. The CVE will be involved throughout the Design Investigation (see Annex A) including:
  - a. Project Definition in support of the Head of the Office of Airworthiness:
    - (1) Supporting the Classification of changes to Design or repair as Major or Minor.
    - (2) Agree the Certification basis through identifying the Airworthiness Requirements eg Def Stan 00-970 or contracted specification. This will include the determination if legacy / 'grandfather rights' can be used.
    - (3) Agree the Means of Compliance including the Test Requirements.
    - (4) Approve the Test Plan.
    - (5) Endorse the project to move to the next phase.
  - b. Testing
    - (1) The CVE is to determine their level of involvement in the testing to satisfy their need to demonstrate compliance, for example to gain confidence that a Test House has conducted the test appropriately or to deal with any issues that arise during the test that need interpretation on compliance. The level of involvement of the CVE is to take into consideration the criticality of the system, maturity of the technology, type of testing etc. Note: the CVE does not conduct the testing.
    - (2) The CVE is to agree the Test Programme and sign the subsequent Test Report to confirm they are content that compliance with the Certification Programme has been demonstrated and that any exceptions or limitations are recorded. Alternatively, the CVE may sign a Compliance Check List (CCL) confirming compliance has been demonstrated. Note: The Test Report or CCL may have multiple CVE signatures covering different disciplines.
    - (3) A record should be retained where the CVE has challenged the test report and the subsequent outcome.
  - c. Verification
    - (1) The CVE is to review all compliance data and make a statement to confirm that verification of compliance has been demonstrated with the applicable Certification

basis, in accordance with the agreed Means of Compliance and that where there have been any exceptions or limitations these have been declared.

### **Queries**

10. Any observations or requests for further guidance on the content of this RN should be submitted by email to [DSA-MAA-MRPEnquiries@mod.uk](mailto:DSA-MAA-MRPEnquiries@mod.uk).

### **MAA Head of Regulation & Certification**

Annex(es):

A. Flow diagram of CVE role in the Design Investigation

Flow diagram of CVE role in the Design Investigation

